APPENDIX 7-21

UNDERGROUND WATER BUDGET

CRANDALL CANYON MINE: UNDERGROUND WATER BUDGET

Current mine water inflow: Total: approximately 100 gpm

Water volumes exiting mine and consumed in mine:

Coal: 27.5 gpm

coal moisture content = 5.5% by weight
current daily production = 3000 tons
- 0.055*(3000 tons/day)*(2000 lbs/ton)*(gal/8.3453 lbs)
*(day/1440 mins) = 27.5 gpm

Evaporation due to mine ventilation: 50-60 gpm ±10%[a]

Infiltration (approx.) along mine floor and sump(s): 10 gpm[a]

Underground mine consumption: 7.6 gpm

continuous miner - (15 gpm)*(4 hrs/shift)*(2 shifts/day)
(240 days/yr)(yr/8760 hrs) = 3.3 gpm

roof bolter - (13 gpm)*(5 hrs/shift)*(2 shift/day)
(240 days/yr)(yr/8760 hrs) = 3.6 gpm

belt lines - (0.25 gpm)*(3 locals)*(6 hrs/shift)*(2 shift/day)
(240 days/yr)(yr/8760 hrs) = 0.2 gpm

bath house - (1000 gal/day)*(240 days/yr)
*(yr/525,600 mins) = 0.5 gpm

Total: approximately 100 gpm

[a] Estimate based on professional judgement and experience at other mines.